

terminal functionality at a position para- to said second ester bond, wherein at least one functionality selected from the group consisting of said first terminal functionality and said second terminal functionality is other than a polymerizable group ; and

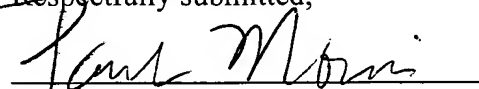
al reacting at least one of said first and second terminal functionalities with a polymerizable group, producing polymerizable mesogens;

wherein, when both said first terminal functionality and said second functionality are polymerizable groups, said desired substituent provides sufficient steric hindrance to achieve a nematic state at room temperature while suppressing crystallinity at room temperature.

REMARKS

Applicants respectfully request entry of the amendments and consideration and allowance of all of the pending claims. The above amendments do not change the scope of the claims, the amendments correct a typographical claim drafting error. Persons of ordinary skill in the art would recognize that "third functionality" should have referred to "second functionality."

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Wellinghoff, et al.

Serial No.: 10/057,548

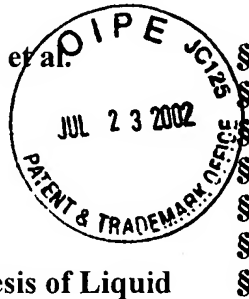
Filed: January 23, 2002

Title: Methods for Synthesis of Liquid
Crystals

Group Art Unit: 1711

Examiner: Not Assigned

Atty. Docket No.: SWRI-2835



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PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENTS

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In the Claims

1. (Amended) A method for producing platform molecules comprising:
providing a first phenylene ring comprising a first functional group at a para-position to a
second functional group;
providing a second phenylene ring comprising a third functional group at a para- position
to a fourth functional group;
providing a third phenylene ring comprising a desired substituent and comprising a first
functionality at a para- position to a second functionality; and
reacting said first functional group with said first functionality, producing at least a first
ester bond between said first phenylene ring and said third phenylene ring; and
reacting said third functional group with said [third] second functionality, producing at
least a second ester bond between said second phenylene ring and said third
phenylene ring, thereby producing platform molecules comprising a first terminal
functionality at position para- to said first intervening ester bond and a second

terminal functionality at a position para- to said second intervening ester bond, wherein at least one functionality selected from the group consisting of said first terminal functionality and said second terminal functionality is other than a polymerizable group;

wherein, when both said first terminal functionality and said second functionality are polymerizable groups, said desired substituent provides sufficient steric hindrance to achieve a nematic state at room temperature while suppressing crystallinity at room temperature.

27. (Amended) A method for producing polymerizable mesogens comprising:
forming a mixture comprising

first phenylene rings comprising a first functional group at a position para-to a second functional group;

second phenylene rings comprising a third functional group at a position para- to a fourth functional group; and

third phenylene rings comprising a desired substituent and comprising a first functionality at a position para- to a second functionality; and

exposing said mixture to conditions effective to react said first functional group and said first functionality, forming a first ester bond between said first phenylene ring and said third phenylene ring, and to react said [second] third functional group and said [third] second functionality forming a second ester bond between said second phenylene ring and said third phenylene ring, thereby producing platform mesogens comprising a first terminal functionality at a position para- to said first ester bond and a second terminal functionality at a position para- to said second

ester bond, wherein at least one functionality selected from the group consisting of said first terminal functionality and said second terminal functionality is other than a polymerizable group ; and

reacting at least one of said first and second terminal functionalities with a polymerizable group, producing polymerizable mesogens;

wherein, when both said first terminal functionality and said second functionality are polymerizable groups, said desired substituent provides sufficient steric hindrance to achieve a nematic state at room temperature while suppressing crystallinity at room temperature.

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